

TEX 7564

OCCASIONAL PAPERS  
THE MUSEUM  
TEXAS TECH UNIVERSITY

SEP 8 1980  
UNIVERSITY

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NUMBER 66

5 SEPTEMBER 1980

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REPLACEMENT NAME FOR MESOSOMA WEED, 1892,  
WITH A REVISION OF THE GENUS  
(OPILIONES, PHALANGIIDAE, LEIOBUNINAE)

JAMES C. COKENDOLPHER

There has been considerable confusion regarding the identity of the species of *Eumesosoma*, as a result of variation and the difficulty in obtaining type specimens. This paper attempts to reduce such confusion by determining the identity of the type specimens, redescribing known species, and describing three new forms of *Eumesosoma*. Under the descriptions of type material that follow, repositories for specimens are denoted by institutional acronyms. A key to these abbreviations is provided in the acknowledgments. Specimens in my personal collection are listed as JCC. All measurements (means in parentheses) are in millimeters.

Because the name *Mesosoma* Weed (1892) is preoccupied by a genus of Crustacea, *Mesosoma* Otto (1821:13), a new name is proposed:

Genus *Eumesosoma*, replacement name

*Phalangium*, Sav. 1821:66 (in part); Wood, 1871:34 (in part); Underwood, 1885:168 (in part); Weed, 1889:105 (in part).

*Astrobunus*, Weed, 1890a:683 (in part), 1890b:914, 917 (in part).

*Mesosoma* Weed, 1892:529 (preoccupied), 1893:286; Banks, 1901:673, 677, 1904:104; Roewer, 1910:189, 257, 1923:920; Banks *et al.*, 1932:34; Comstock, 1948:66, 76; Goodnight and Goodnight, 1943:651; Roewer, 1957:347; Reddell, 1970:409; Katayama and Post, 1974:9, 14; Elliott and Reddell, 1975:71; Rowland and Reddell, 1976:12.

*Type species.*—*Eumesosoma nigrum* (Say).

*Etymology.*—The generic name *Eumesosoma* is feminine in gender and formed from the Greek *eu* meaning true and *mesosoma* referring to the middle body.

*Diagnosis.*—*Eumesosoma* differs from all other described Leio-buninae genera by: presence of lateral coxal denticles, femora I shorter than length of body, fourth pair of legs nearly as long as second, body hard and granulose dorsally, male palpal tarsi with ventral row of denticles, absence of pseudosegments in tibiae of legs.

*Description.*—Body hard and granulose, ovate (Fig. 1). Ocular tubercle approximately equal in length and width, not carinated, without large spines. Carapace with raised area in front of ocular tubercle, lacking large spines. Chelicerae not enlarged, with tooth on ventral surface of first joint. Two supracheliceral lamellae variously ornamented with spines and tubercles. Coxae, except posterior portion of III, with lateral rows of denticles or spines. Legs short, robust; fourth pair nearly as long as second. Femora and tibiae without nodules or pseudosegments. Femora I shorter than length of body; IV bent to follow curvature of abdomen. Palpi not branched, moderately robust; tarsi with ventral rows of denticles in males, unarmed in females; claw pectinate. Penis alate; shaft thin and long, contracted and bent dorsally distal to alate portion, ending in sharp tip; alate portion consisting of two sacs opening distally.

*Distribution.*—Central and southeastern United States (see Figs. 5, 6).

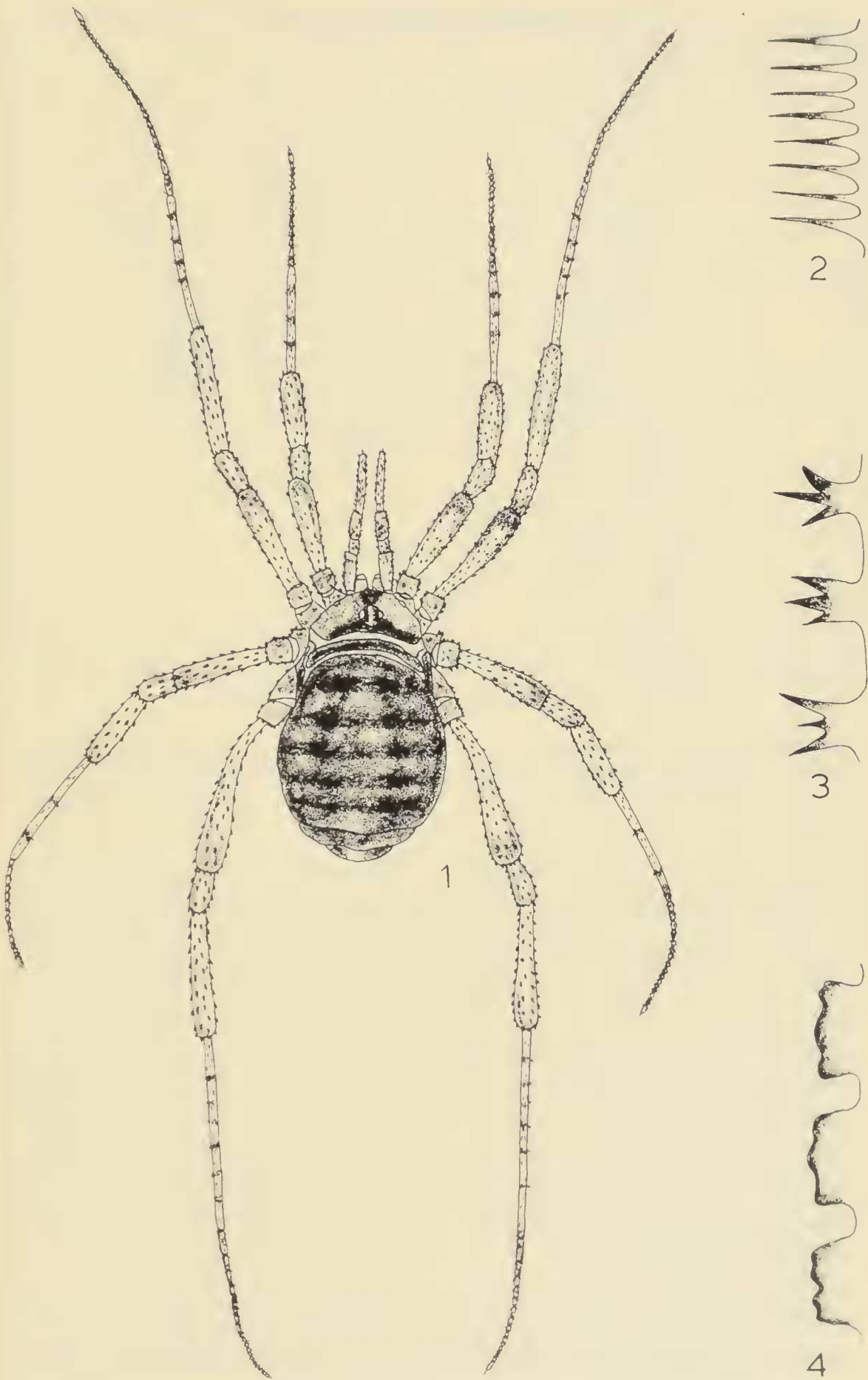
*Eumesosoma arnetti*, new species

(Figs. 5, 9, 16, 17)

*Types.*—Holotype male, eight male and five female paratypes from Angelina Co., Texas, 4 June 1952 (Causey); MCZ. Two male and three female paratypes from Harris Co., Texas, 4 June 1952 (Causey); MCZ. One female paratype from North of Atlanta, Cass Co., Texas, 1 June 1954 (Causey); MCZ. One male and two female paratypes from 4.8 km. NE of College Station, Brazos Co., Texas, 2 April 1977 (J. C. Cokendolpher); one female FSCA, all others JCC.

*Type locality.*—Angelina Co., Texas.

*Etymology.*—The specific epithet is a patronym honoring Dr. Ross H. Arnett, Jr. who first introduced me to the study of arthropod systematics.



FIGS. 1-4.—Dorsal view: 1, male *E. roeweri*. Coxal denticles of: 2, *E. nigrum*; 3, *E. ephippiatum*; 4, *E. roeweri*.

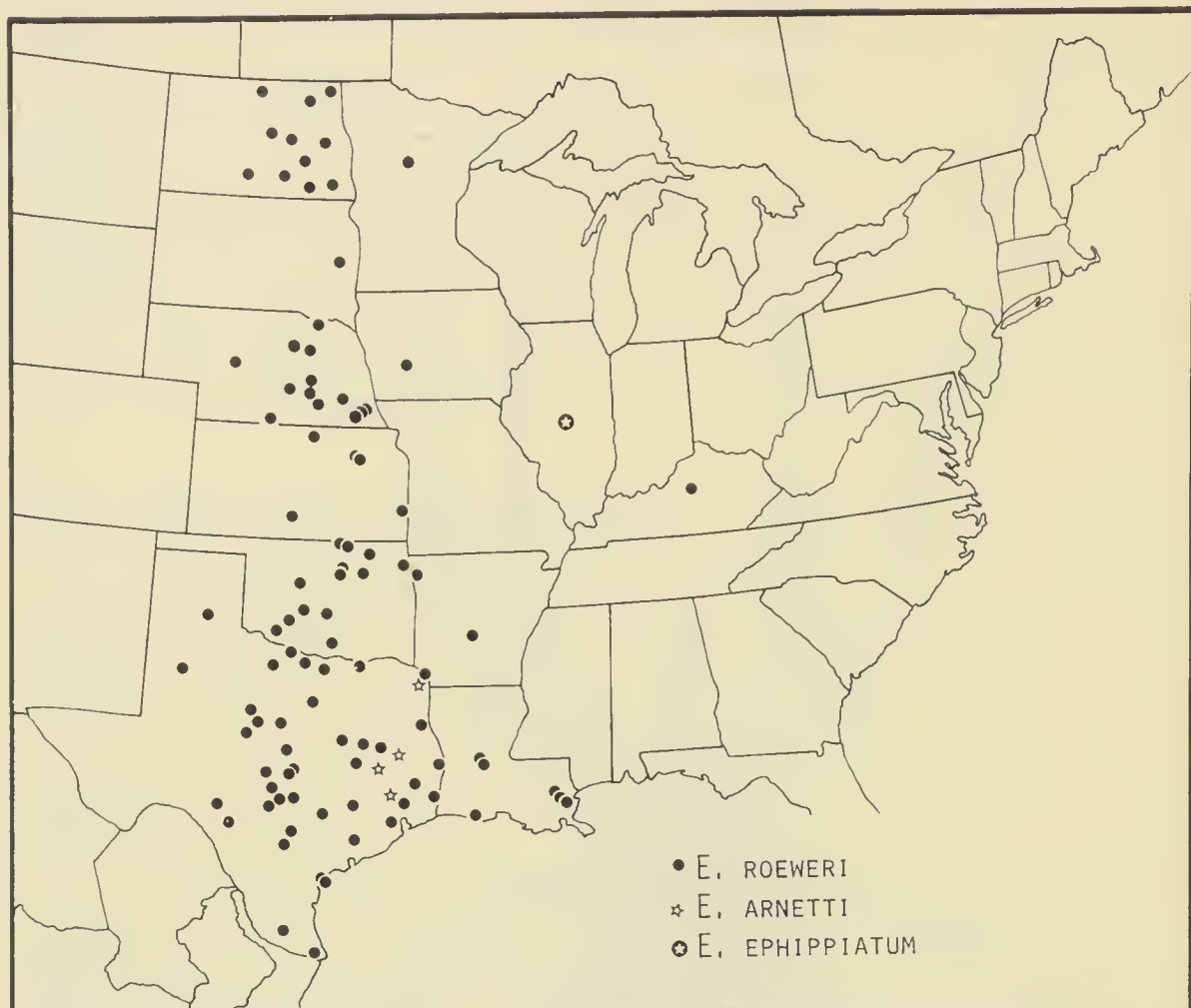


FIG. 5.—Distribution of *E. roeweri*, *E. arnetti*, and *E. ephippiatum* in the United States.

*Diagnosis.*—*Eumesosoma arnetti* differs from all other species of *Eumesosoma*, except *E. roeweri*, by having the lateral denticles on the coxae large and rounded. Males of *E. arnetti* are distinguished easily from those of *E. roeweri* by the form of the penes. Individual females are often difficult to identify, but the more golden color and longer femora II generally will separate *E. arnetti* from the darker colored *E. roeweri*. Femora II mean length of *E. arnetti*  $4.08 \pm 0.11$  ( $N=11$ ), for *E. roeweri*  $3.56 \pm 0.05$  ( $N=162$ ). *Eumesosoma roeweri* in the area of possible sympatry (Texas, Oklahoma, Arkansas, Louisiana) are slightly larger than those from areas of strict allopatry with mean length of femora II  $3.65 \pm 0.06$  ( $N=89$ ).

*Description.*—Female ( $N=11$ ): Body robust, ovate, total length 7.00-7.80 (7.28), greatest width 4.25-5.22 (5.02), maximum height 3.58-4.43 (3.98); dorsum dark brown with reddish black mottlings; venter yellow brown. No distinct dorsal pattern, often with irregular yellow brown patches. Ocular tubercle round, diameter 0.50-0.59 (0.54), with obtuse tubercles and median, longitudinal, light

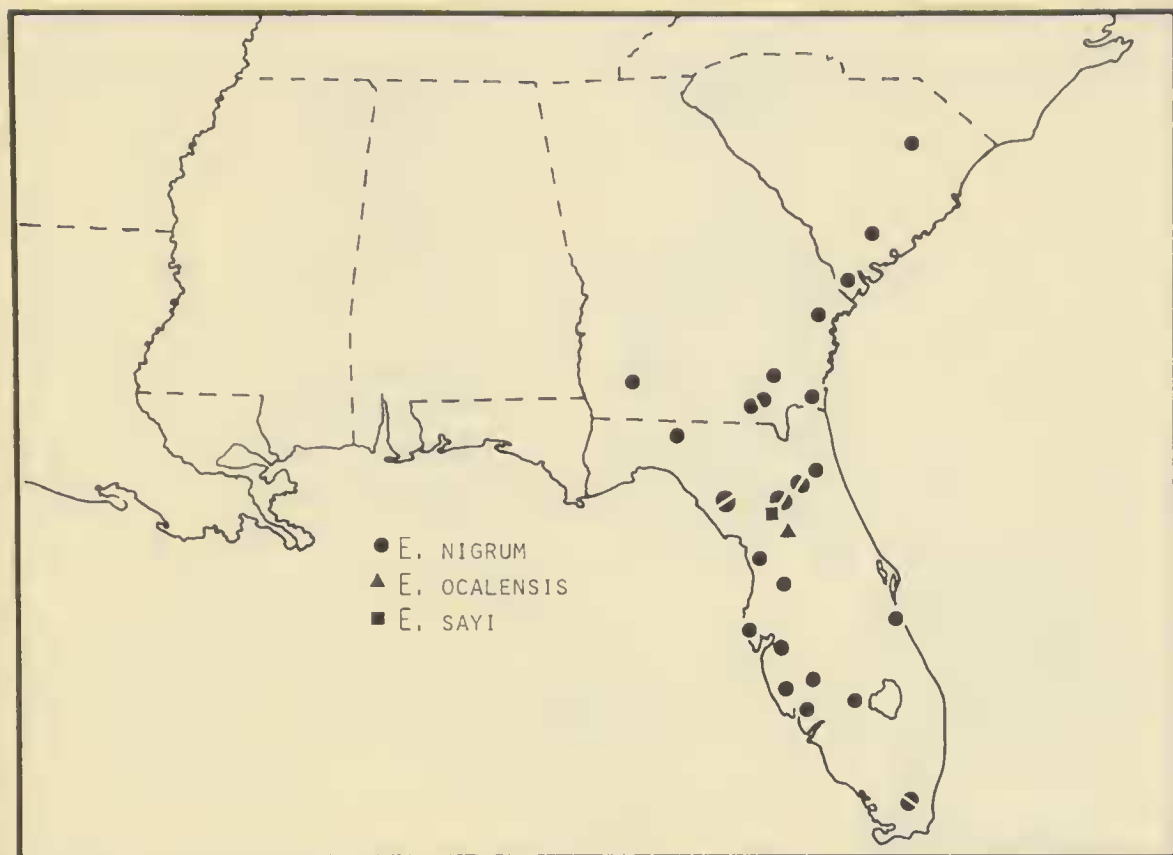
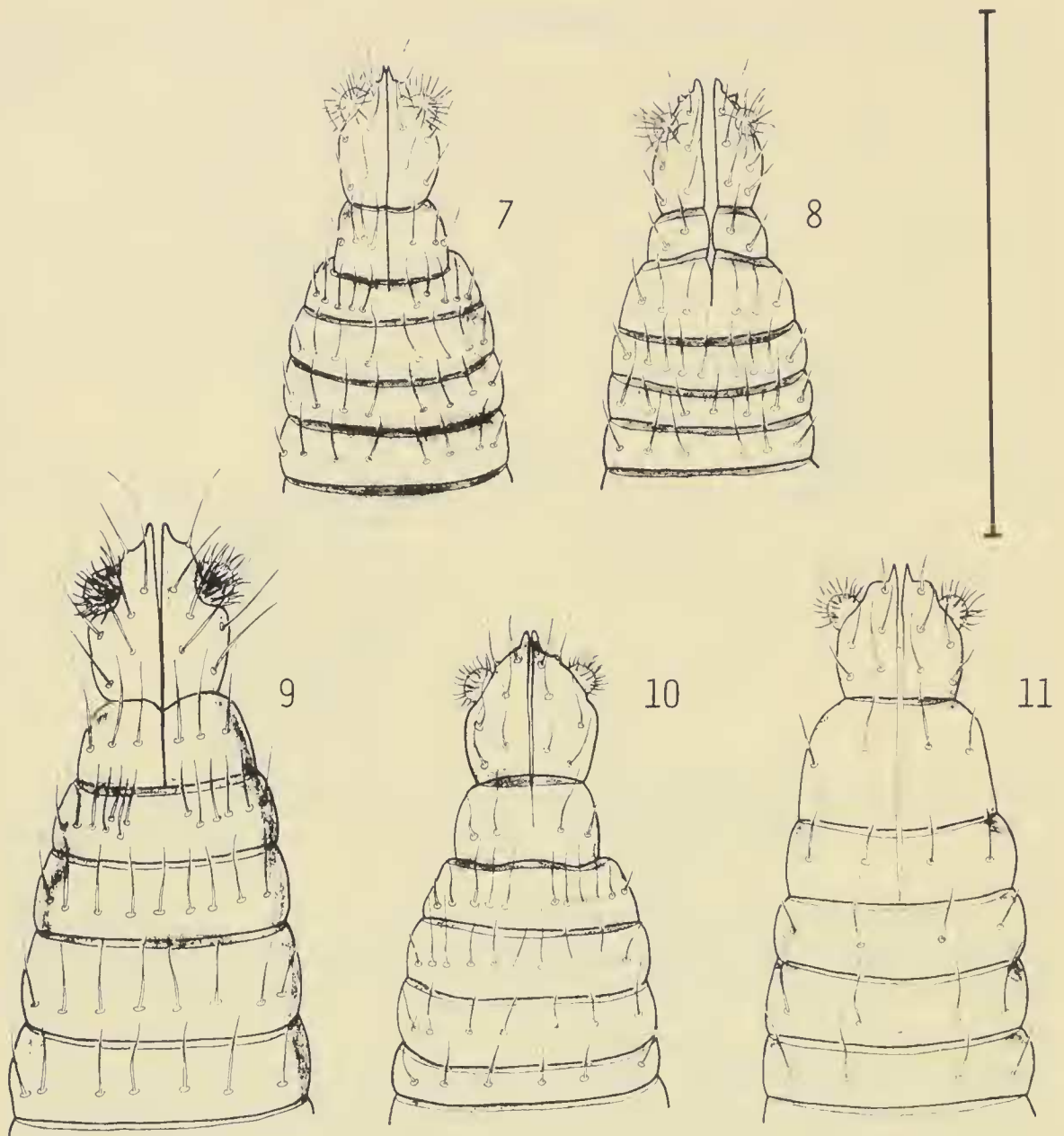


FIG. 6.—Distribution of *E. nigrum*, *E. sayi*, and *E. ocalensis* in the United States.

yellow stripe. Supracheliceral lamellae with two or more obtuse tubercles; obtuse tubercles also scattered over entire body. Genital operculum length 1.60-1.96 (1.72), width at base 1.20-1.68 (1.52), width at neck 0.70-0.90 (0.83); with lateral rows of large obtuse tubercles and scattered small spines. Palpi yellow to gold; patellae, basal portion of femora, and lateral portions of tibiae yellow brown to brown; large pointed tubercles on venter of femora, dorsal and lateral portions of patellae, and venter of tibiae; small spines present on all segments. Palpal lengths: femora 0.90-0.97 (0.94), patellae 0.58-0.64 (0.61), tibiae 0.60-0.80 (0.70), tarsi 1.39-1.45 (1.42). Legs golden yellow to yellow brown; distal portions of femora and lateral surfaces of patellae and tibiae dark brown. Coxae with lateral rows of broad, rounded denticles, having three to eight lobes. Posterior portions of coxae II and anterior portion of III drawn out into small lobes, covered with obtuse tubercles. Femora I-IV lengths, respectively: 2.20-2.60 (2.43), 3.92-4.85 (4.29), 2.35-2.85 (2.58), 4.09-4.38 (4.22); tibiae lengths, respectively: 1.80-2.00 (1.87), 2.70-3.45 (3.24), 1.89-2.09 (1.94), 2.60-3.09 (2.78). Ovipositor typical for the genus (Fig. 9).

Male ( $N=12$ ): Form and coloration as in female; body smaller and more elongate; total length 5.20-6.39 (5.85), greatest width



FIGS. 7-11.—Female ovipositors: 7, *E. ocalensis*; 8, *E. nigrum*; 9, *E. arnetti*; 10, *E. roeweri*; 11, *E. ephippiatum* (scale line, 2 mm.).

3.70-4.40 (4.15), maximum height 2.59-4.40 (3.31). Ocular tubercle diameter 0.42-0.52 (0.47). Genital operculum length 1.42-1.90 (1.64), width at base 1.26-1.58 (1.39), width at neck 0.78-0.88 (0.83). Femora I-IV lengths, respectively: 2.18-2.60 (2.34), 3.34-4.20 (3.84), 2.18-3.00 (2.20), 3.50-4.62 (4.02); tibiae I-IV lengths, respectively: 1.61-2.10 (1.82), 2.78-3.41 (3.20), 1.58-2.05 (1.82), 2.42-3.28 (2.68). Palpal lengths: femora 0.86-1.00 (0.95), patellae 0.58-0.68 (0.63), tibiae 0.62-0.80 (0.72), tarsi 1.16-1.40 (1.30). Penis as in Figs. 16, 17.

Immatures: Unknown.

*Distribution*.—Known only from eastern Texas (Fig. 5).

*Natural history.*—Adults of this species have been captured during April and June. The three specimens taken by the author were under a log in a meadow surrounded by dense oak woods.

*Specimens examined.*—Only the type series.

*Eumesosoma roeweri* (Goodnight and Goodnight), new combination (Figs. 1, 4, 5, 10, 12-15)

*Phalangium nigrum*, Wood, 1871:34, 40 (in part); Underwood, 1885:168 (in part); Weed, 1889:105 (in part).

*Astrobunus nigrum*, Weed, 1890a:683 (in part), 1890b:914, 917 (in part).

*Mesosoma nigrum*, Weed, 1892:529, 1893:286, pl. 5; Roewer, 1923:920, fig. 1065 (in part); Comstock, 1948:76 (in part); Rowland and Reddell, 1976:12.

*Mesosoma niger*, Banks, 1901:677 (in part); Roewer, 1910:258, pl. 6, fig. 14 (in part); Banks *et al.*, 1932:34.

*Mesosoma roeweri* Goodnight and Goodnight, 1943:651; Reddell, 1970:409; Katayama and Post, 1974:9, 14, pl. 1, 4-6; Rowland and Reddell, 1976:12.

*Mesosoma texanum* Goodnight and Goodnight, 1943:652, fig. 13; Roewer, 1957:347; Elliott and Reddell, 1975:71; Rowland and Reddell, 1976:12. New synonymy.

*Types.*—Male holotype of *E. roeweri* (Goodnight and Goodnight) from Houston, Harris Co., Texas, 11 June 1937 (S. Mulaik); AMNH, examined. Male holotype of *M. texanum* Goodnight and Goodnight from Goose Creek (now part of Baytown, a suburb of Houston), Harris Co., Texas, October 1931; AMNH, examined.

*Type locality.*—Houston, Harris Co., Texas.

*Diagnosis.*—This species differs from all other *Eumesosoma* species, except *E. arnetti*, by having the lateral denticles on the coxae large and rounded. Males of this species can be distinguished from males of *E. arnetti* by the form of the penes. Females are best separated by the lengths of femora II (see diagnosis of *E. arnetti*). *Eumesosoma roeweri* immatures differ from all other known immature congeners by the absence of coxal lobes and tri-pointed spines on the body.

*Description.*—Female ( $N=12$ ): Body robust, ovate; total length 5.00-8.70 (7.16), greatest width 4.00-6.25 (4.95), maximum height 3.58-5.00 (4.00). Ocular tubercle round, diameter 0.50-0.58 (0.53), with obtuse tubercles. Supracheliceral lamellae with one or more obtuse tubercles. Tubercles also scattered over entire body. Genital operculum length 1.28-1.97 (1.74), width at base 1.22-1.71 (1.54), width at neck 0.72-0.95 (0.85); operculum possessing lateral rows of large obtuse tubercles and scattered small spines. Palpi with large pointed tubercles on venter of femora, dorsal and lat-

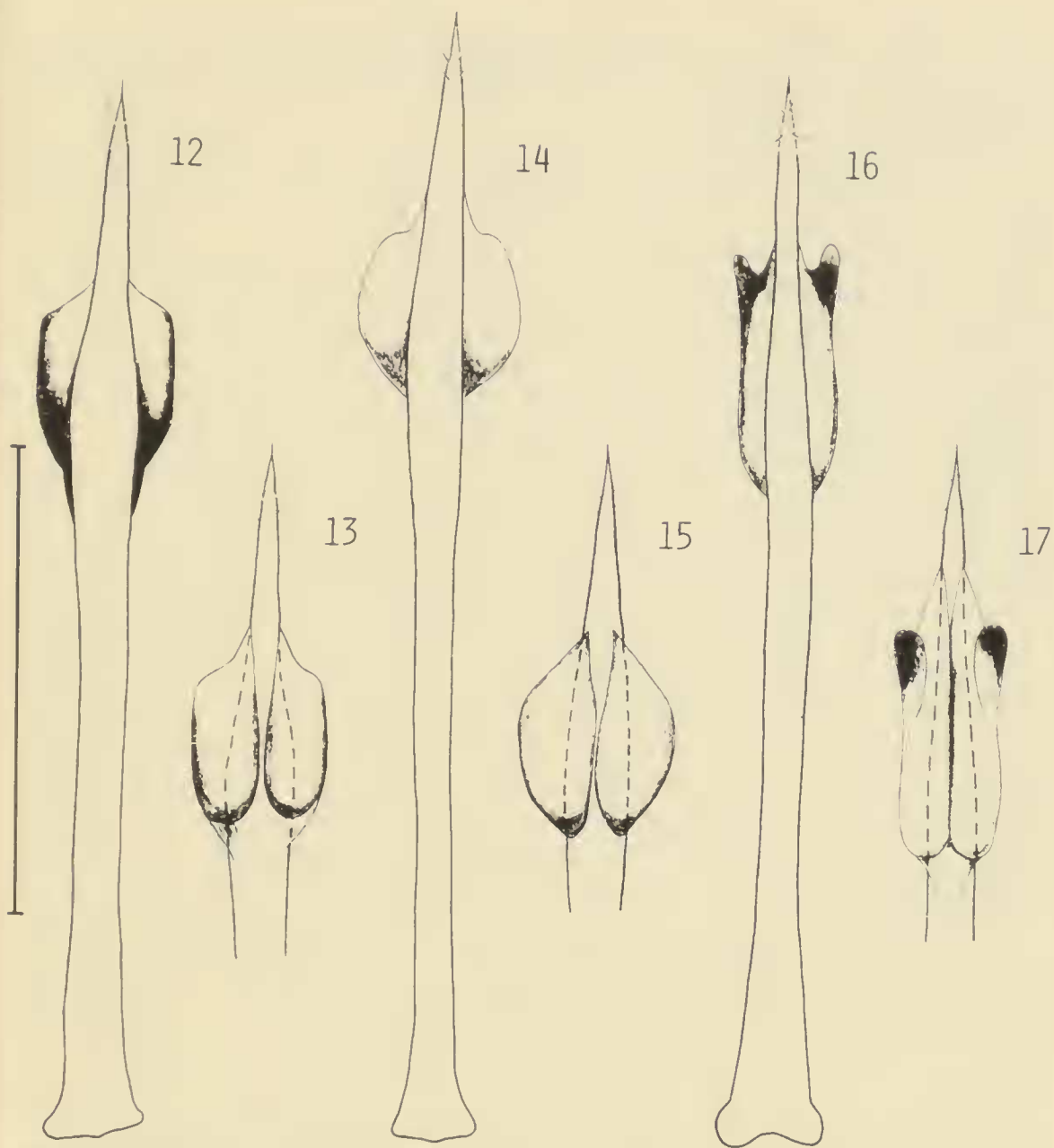
eral surfaces of patellae and venter of tibiae; thin spines on all segments. Palpal lengths: femora 0.72-1.10 (0.90), patellae 0.58-0.82 (0.64), tibiae 0.60-0.82 (0.66), tarsi 1.18-1.48 (1.32). Coxae with broad, rounded, lateral rows of denticles; having three to eight lobes (Fig. 4). Posterior of coxae II, anterior of III, and sometimes anterior of IV have small lobes covered with obtuse tubercles. Femora I-IV lengths, respectively: 1.90-2.60 (2.28), 2.35-4.22 (3.50), 1.60-2.58 (2.22), 3.32-4.20 (3.72); tibiae I-IV lengths, respectively: 1.40-1.83 (1.67), 2.10-3.62 (2.81), 1.60-2.20 (1.94), 1.40-2.85 (2.18). Ovipositor typical for the genus (Fig. 10). Coloration extremely variable, may be black except for reddish brown genital operculum, coxae, trochanters, and bases of femora of legs and tarsi of palpi. Some specimens entirely light yellow brown but more commonly with brown dorsum, dark brown ocular tubercle with yellow longitudinal stripe, last two abdominal tergites yellow, and scattered small yellow dots covering entire dorsum. Venter of abdomen, chelicerae, palpi, and legs yellow to reddish brown; with venter and distal portions of femora, dorsum of patellae and tibiae of palpi, as well as ventral and lateral portions of legs, dark brown; dorsum of patellae and tibiae of legs often with brown splotches.

Male ( $N=12$ ): Form (Fig. 1) and coloration as in females; body smaller; total length 5.10-6.60 (5.63), greatest width 3.00-4.20 (3.54), maximum height 2.57-3.79 (3.03). Ocular tubercle diameter 0.40-0.54 (0.46). Genital operculum length 1.37-1.64 (1.50), width at base 1.13-1.43 (1.30), width at neck 0.56-0.87 (0.76). Femora I-IV lengths, respectively: 1.82-2.90 (2.24), 2.49-4.60 (3.36), 1.67-3.00 (2.36), 2.82-4.12 (3.56); tibiae I-IV lengths, respectively: 1.40-1.94 (1.68), 2.17-3.25 (2.73), 1.45-2.20 (1.81), 2.20-2.81 (2.45). Palpal lengths: femora 0.80-1.00 (0.89), patellae 0.51-0.60 (0.58), tibiae 0.58-0.68 (0.63), tarsi 1.10-1.39 (1.24). Alate portion of penes varies slightly in the length and shape but is always convergent anteriorly (Figs. 12-15).

Immatures: General form as in adults, body soft, reticulate, with many small spines, cream to light brown splotched with white. Palpal patellae slightly extended on inner margin with brush of spines. Penultimate stage soft bodied, but with tubercles on body; coxal denticles generally smaller and more rounded; genital operculum fused to abdomen.

*Distribution.*—Central United States (Fig. 5); from Texas northward to North Dakota and east to Kentucky (introduced?).





Figs. 12-17.—Dorsal (12, 14, 16) and ventral (13, 15, 17) views of male penes of: 12-15, *E. roeweri*; 16-17, *E. arnetti* (scale line, 1 mm.).

*Natural history.*—*Eumesosoma roeweri* is part of the prairie fauna throughout its range. Even in the southern reaches of its distribution this species will be encountered more often in grasslands than in the forests.

In the north (Dakotas, Minnesota, Iowa, Nebraska, and Kansas), adults have been found only from late July to early October and immatures from early May to August. In the south (Oklahoma, Arkansas, Louisiana, and Texas), adults are recorded year-round and immatures have been collected from February to late May. A female captured in southern Oklahoma on 23 November deposited 22 eggs in the laboratory four days later; the eggs were laid on a moist paper towel. Limited information suggests ovipo-

sition takes place in the autumn, with eggs hatching in the spring (late winter in warmer climates) and sexual maturation occurring by summer.

Specimens maintained in the laboratory do well on a diet of beer and sugar water, but lettuce, cockroaches, and moths are eaten as well; no cannibalism was noted.

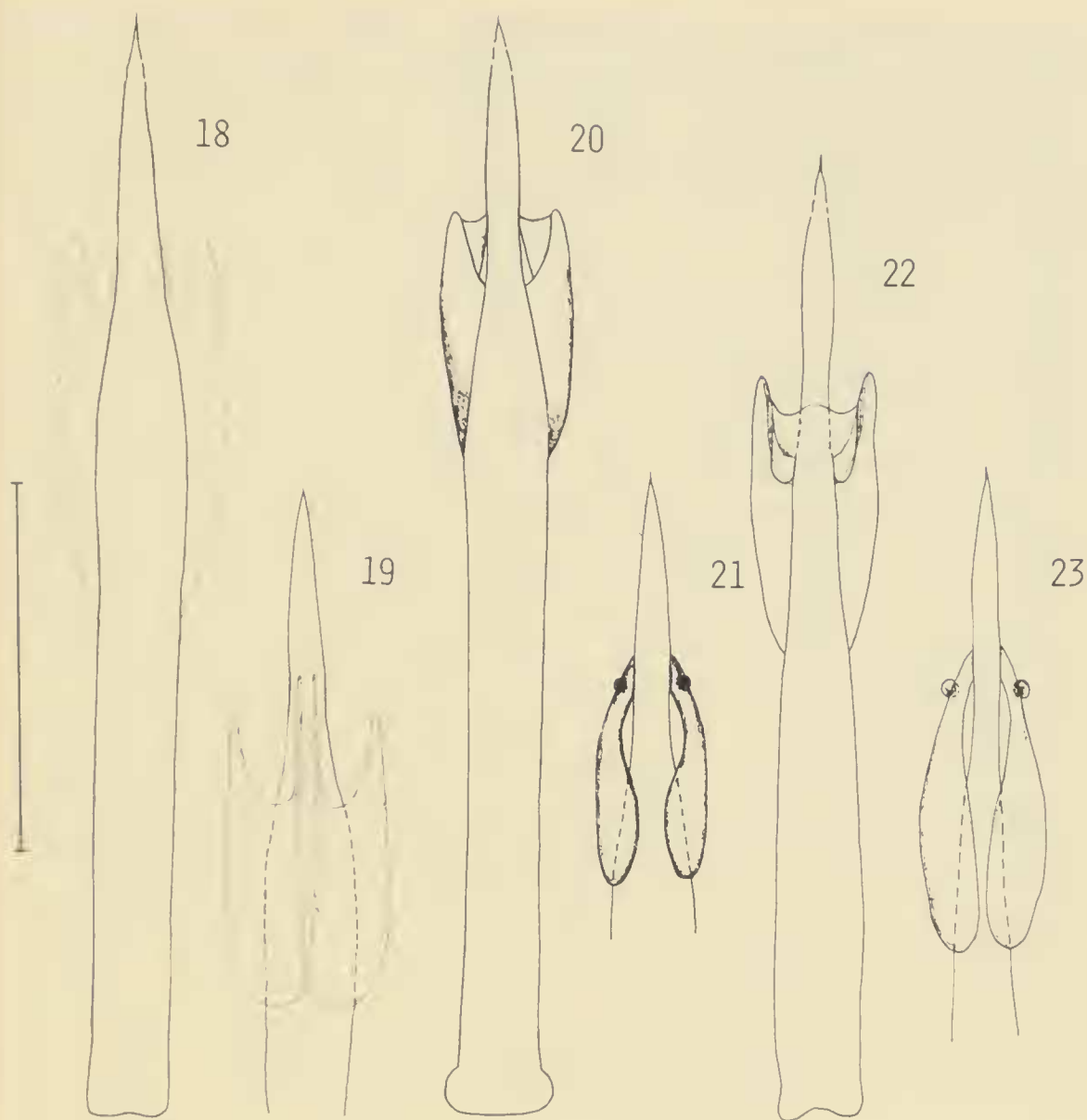
*Specimens examined* (831).—A total of 273 males, 261 females, and 297 immatures were examined. The number of specimens reported here were pooled over counties for convenience, but a more detailed list of collecting localities is available from the author and is on deposit with the museums recorded in the acknowledgments section. KENTUCKY: Boyle Co., 10. IOWA: Audubon Co., 35. MINNESOTA: Clay Co., 7. NORTH DAKOTA: Bottineau Co., 5; Cavalier Co., 2; Pembina Co., 2; Sheridan Co., 57; Trail Co., 5; Stutsman Co., 3; Sioux Co., 3; McIntosh Co., 1; La Moure Co., 4; Sargent Co., 37; Richland Co., 88. NEBRASKA: Knox Co., 1; Antelope Co., 7; Lincoln Co., 3; Harlan Co., 4; Hall Co., 6; Merrick Co., 3; Lancaster Co., 1; Saline Co., 4; Gage Co., 3; Johnson Co., 6; Holt Co., 2; Howard Co., 3. KANSAS: Jewell Co., 3; Jackson Co., 1; Douglas Co., 7; Bourbon Co., 4; Kingman Co., 5; Barber Co., 6; Woodson Co., 1. OKLAHOMA: Kay Co., 1; Osage Co., 4; Tulsa Co., 16; Wagoner Co., 8; Payne Co., 1; Cleveland Co., 13; Kingfisher Co., 2; Grady Co., 2; Comanche Co., 90; Tillman Co., 1; Love Co., 1. ARKANSAS: Washington Co., 1; Grant Co., 2. LOUISIANA: Natchitoches Parish, 3; Rapides Parish, 2; Beauregard Parish, 9; East Baton Rouge Parish, 3; St. Charles Parish, 8; Jefferson Parish, 1. TEXAS: Randall Co., 1; Lubbock Co., 1; Clay Co., 1; Wichita Co., 56; Archer Co., 5; Gray Co., 1; Grayson Co., 22; Bowie Co., 1; Panola Co., 1; McLennan Co., 3; Robertson Co., 8; Leon Co., 4; Jasper Co., 1; Orange Co., 2; Liberty Co., 3; Harris Co., 6; Brazoria Co., 1; Austin Co., 1; Victoria Co., 1; San Patricio Co., 73; Nueces Co., 4; Cameron Co., 12; Hidalgo Co., 11; Edwards Co., 23; Uvalde Co., 6; Bexar Co., 13; Comal Co., 3; Caldwell Co., 1; Kerr Co., 7; Hays Co., 1; Travis Co., 17; Burnett Co., 2; Mason Co., 9; Brown Co., 10; Comanche Co., 6; Taylor Co., 12; Parker and Palo Pinto Cos., 1; County unknown, 1. LOCALITY UNKNOWN: 3.

*Eumesosoma ephippiatum* (Roewer), new combination  
(Figs. 3, 5, 11)

*Mesosoma ephippiatum* Roewer, 1923:921, 1957:347.

*Mesosoma nigrum*, Goodnight and Goodnight, 1943:651 (in part).

*Types*.—Roewer (1923) reported the type series as "2 (♂♀), 2 pull." and in 1957 referred to the same series as "1♂ (Typus), 1♀ (Allotypus), 2 (Inadult)." Examination of Roewer's material showed there are actually two adult females (one slightly smaller than other) and two immatures (male and female). Because sexes can only be determined after an examination of internal genitalia, and as the genitalia had not been exposed, Roewer must have assumed the smaller female was a male (male phalangiids are generally not as large as females). I designate the smaller female



Figs. 18-23.—Dorsal (18, 20, 22) and ventral (19, 21, 23) views of male penes of: 18-19, *E. nigrum*; 20-21, *E. sayi*; 22-23, *E. ocalensis* (scale line, 2 mm.).

as the lectotype and the remaining three specimens as paralectotypes; all specimens SMF (cat. no. RII 388 15).

*Type locality*.—Illinois, no specific locality reported by Roewer (1923).

*Diagnosis*.—Presence of tri-pointed spines on coxae and genital operculum as well as the lack of obtuse tubercles on venter of abdomen separate *E. ephippiatum* from all known species of *Eumesosoma*. Immatures of this species differ from all other congeners by the presence of tri-pointed spines on the abdomen.

*Description*.—Female ( $N=2$ , measurements for lectotype listed first): Body robust, ovate, total length 4.13, 4.38, greatest width 2.86, 3.00, maximum height 2.74, 2.81; rust colored dorsally, yellow to rust ventrally. No distinct dorsal pattern, but one female

with scattered, light colored patches. Ocular tubercle round, diameter 0.38, 0.40, with obtuse tubercles and few single and tri-pointed spines. Anterior margin of dorsum with few tri-pointed spines. Supracheliceral lamellae with many tri-pointed spines. Obtuse tubercles scattered over entire dorsum, fewer on lateral margin of abdomen venter. Genital operculum length 1.01, 1.00, width at base 1.05, 1.06, width at neck 0.56, 0.56; operculum with lateral rows of tri-pointed spines and a few thin, pointed spines. Palpi with femora, patellae, and tibiae light brown, tarsi yellow; palpi with small spines and tubercles. Palpal lengths: femora 0.63, 0.63, patellae 0.29, 0.33, tibiae 0.38, 0.38, tarsi 0.90, 0.88. Legs robust, light yellow; coxae and trochanters appearing darker due to the many brown tipped spines. Femora I-IV lengths, respectively: 1.89, 1.83; 3.25, 3.31; 1.95, 1.90; 3.13, 3.06; tibiae I-IV lengths, respectively: 1.64, 1.69; 3.19, 3.13; 1.49, 1.44; 2.31, 2.14. Ovipositor with reduced number of primary setae (Fig. 11).

Male: Unknown.

Immatures: Both known immatures (penultimate stage? total length of body 3.13, 3.31) are essentially the same as adult females; body ovate and robust, cream to light yellow in color. Body also covered with brown tipped, tri-pointed spines.

*Distribution*.—Known only from the type locality (Fig. 5).

*Specimens examined*.—Only the type series.

### *Eumesosoma ocalensis*, new species

(Figs. 6, 7, 22, 23)

*Types*.—Male holotype and three female paratypes from Juniper Springs, Ocala National Forest, Marion Co., Florida, 21 September 1930 (N. W. Davis); part of Cornell University collection on indefinite loan to AMNH. One female paratype from Marion Co., Florida, 16 June 1959, (H. A. Denmark), collected in *Pinus clausa* debris; FSCA.

*Type locality*.—Ocala National Forest, Marion Co., Florida.

*Etymology*.—The specific name is an adjectival form derived from the type locality.

*Diagnosis*.—*E. ocalensis* can be distinguished from all other species of *Eumesosoma* by the presence of obtuse tubercles on the coxae and genital operculum, and the existence of lateral rows of simple spines on the coxae.

*Description*.—Female ( $N=4$ ): Body slender, total length 4.40-4.80 (4.52), greatest width 2.80-3.36 (3.12), maximum height 2.12-

2.75 (2.34); color black to reddish brown mottled with black, dorsum slightly darker. Ocular tubercle round, diameter 0.40-0.45 (0.44), with obtuse tubercles; ocular tubercle lacking spines. Supracheliceral lamellae with many small pointed tubercles or spines. Obtuse tubercles scattered over entire body. Genital operculum length 1.15-1.25 (1.20), width at base 1.05-1.13 (1.09), width at neck 0.60-0.62 (0.61); operculum with lateral rows of small spines. Palpi with femora and patellae yellow to reddish brown, darker on distolateral surfaces and dorsum of femora, patellae, and the median dorsal surfaces of the tibiae; palpi with small tubercles and spines. Palpal lengths: femora 0.50-0.90 (0.70), patellae 0.37-0.45 (0.41), tibiae 0.40-0.53 (0.47), tarsi 0.89-1.02 (0.95). Legs robust, yellow to reddish brown, often darker on distal portions of femora, patellae, and tibiae. Coxae with lateral rows of simple spines; lobes present on posterior surfaces of coxae I, II, IV (lobes on IV small) and anterior surfaces of III and IV; lobes covered with small spines and pointed tubercles. Femora I-IV lengths, respectively: 1.48-2.00 (1.70), 2.10-3.05 (2.48), 1.55-1.85 (1.68), 2.59-2.70 (2.63); tibiae I-IV lengths, respectively: 1.10-1.40 (1.29), 2.30-2.76 (2.43), 1.20-1.50 (1.35), 1.81-2.25 (2.04). Ovipositor typical for the genus (Fig. 7).

Male ( $N=1$ ): Form and coloration as in female, body slightly smaller, total length 4.20, greatest width 2.40, maximum height 2.10. Ocular tubercle diameter 0.48. Genital operculum length 1.14, width at base 0.90, width at neck 0.60. Femora I-IV lengths, respectively: 1.78, 3.20, 1.90, 3.10; tibiae lengths, respectively: 1.50, 2.80, 1.52, 2.50. Palpal lengths: femora 0.80, patellae 0.32, tibiae 0.50, tarsi 0.85. Penis as in Figs. 22, 23.

Immatures: Unknown.

*Distribution*.—Known only from Marion Co., Florida (Fig. 6).

*Specimens examined*.—Only the type series.

*Eumesosoma sayi*, new species

(Figs. 6, 20, 21)

*Type*.—Male holotype collected 22.4 km. SW Gainesville, Alachua Co., Florida, 2-XI-1972 (Wm. H. Pierce); FSCA.

*Type locality*.—22.4 km. SW Gainesville, Alachua Co., Florida.

*Etymology*.—The specific name is a patronym honoring Thomas Say, who described the first Opiliones from the United States.

*Diagnosis.*—Presence of thin spines or setae on lateral surfaces of coxae and lack of obtuse tubercles on the genital operculum and coxae will separate this species from all other known *Eumesosoma*, except *E. nigrum* (Say). Differences in the penes distinguish *E. sayi* from *E. nigrum*.

*Description.*—Female: Unknown.

Male ( $N=1$ ): Body small, total length 4.00, greatest width 2.65, maximum height 2.04; dorsum black, venter with black abdomen and reddish brown genital operculum. Ocular tubercle round, diameter 0.42, with obtuse tubercles; ocular tubercle lacking spines. Supracheliceral lamellae reddish brown in color, covered with small spines. Obtuse tubercles scattered over entire body, except for genital operculum and coxae. Genital operculum length 1.10, width at base 0.92, width at neck 0.56; operculum with many small spines on margins. Palpi yellow brown, darker on distal third of femora, dorsal surface of tibiae, and entire patellae; palpi covered with small tubercles and spines. Palpal lengths: femora 0.83, patellae 0.40, tibiae 0.61, tarsi 0.85. Legs reddish brown to yellow brown, marked with reddish black to black on distal femora, patellae, and tibiae. Coxae with lobes on posterior surfaces of I, II, III and anterior surfaces of III, IV; lobes on coxae IV small; all lobes bear small spines. Femora I-IV lengths, respectively: 1.35, 2.26, 1.40, 2.31; tibiae I-IV lengths, respectively: 1.06, 2.10, 1.20, 1.78. Penis as in Figs. 20, 21.

Immatures: Unknown.

*Distribution.*—Known only from type locality (Fig. 6).

*Specimens examined.*—Only the holotype.

*Eumesosoma nigrum* (Say), new combination

(Figs. 2, 6, 8, 18, 19)

*Phalangium nigrum* Say, 1821:66; Wood, 1871:34 (in part); Underwood, 1885:168; Weed, 1889:105 (in part).

*Astrobunus nigrum*, Weed, 1890b:914, 917 (in part).

*Mesosoma nigrum*, Weed, 1892:529 (in part); Roewer, 1923:920 (in part), 1957:347; Goodnight and Goodnight, 1943:651 (in part); Comstock, 1948:78 (in part).

*Mesosoma niger*, Banks, 1901:677 (in part), 1904:140; Roewer, 1910:258 (in part).

*Types.*—The female type described, but not illustrated, by Say (1821) and placed in the Philadelphia Academy of Natural Sciences is lost or destroyed (Otto, personal communication). I have not been able to locate misplaced Say types in other major collections (listed in the acknowledgements). Because Say described his

material from the Carolinas and Georgia, I am therefore, selecting a specimen from that area as the neotype. The neotype is an adult female from Hardeeville, Jasper Co., South Carolina, 29 September 1930 (T. H. Hubbell); part of the Cornell University collection on indefinite loan to AMNH.

*Type locality*.—Hardeeville, Jasper Co., South Carolina.

*Diagnosis*.—This species can be distinguished from all other species of *Eumesosoma*, except *E. sayi*, by the lack of obtuse tubercles on the coxae and genital operculum; coxae with rows of simple spines laterally. Males of *E. nigrum* differ from those of *E. sayi* by the form of the penes. Immatures differ from all known *Eumesosoma* species by having coxal lobes.

*Description*.—Female ( $N=12$ ): Body slender, total length 4.75-5.29 (5.05), greatest width 3.02-3.77 (3.36), maximum height 2.14-3.40 (2.71). Ocular tubercle round, diameter 0.41-0.54 (0.48), with obtuse tubercles, lacking spines. Supracheliceral lamellae and raised area in front of ocular tubercle with many small spines or tubercles. Obtuse tubercles scattered over entire body, except coxae and genital operculum. Genital operculum length 1.01-1.31 (1.23), width at base 0.88-1.23 (1.11), width at neck 0.58-0.75 (0.64). Genital operculum and coxae (Fig. 2) with lateral rows of small spines. Palpi with small spines, lacking large tubercles. Palpal lengths: femora 0.50-0.83 (0.68), patellae 0.38-0.50 (0.44), tibiae 0.35-0.60 (0.48), tarsi 0.82-1.03 (0.96). Legs slender; coxae with lobes on posterior of I, II, IV and anterior of IV (anterior of IV small), covered with small spines. Femora I-IV lengths, respectively: 1.40-1.60 (1.48), 2.10-2.80 (2.51), 1.42-1.76 (1.54), 2.25-2.80 (2.48); tibiae I-IV lengths, respectively: 1.09-1.26 (1.20), 2.08-2.42 (2.25), 1.05-1.29 (1.20), 1.69-2.85 (2.01). Ovipositor typical for the genus (Fig. 8). Coloration varies from solid black to light brown with yellow brown splotches. Commonly, dorsum is reddish brown with black spots, penultimate abdominal tergite yellow brown, venter lighter in color. Palpi dark brown on distal portions of femora, patellae and proximal portion of tibiae, otherwise yellow to light brown. Chelicerae yellow, black teeth. Legs dark brown to black on distal portions of femora, dorsum of patellae, and sometimes dorsum of tibiae, otherwise yellow to reddish brown.

Male ( $N=12$ ): Form and coloration as in females, body slightly smaller and more elongate; total length 3.80-4.67 (4.12), greatest width 2.35-3.71 (2.74), maximum height 1.62-2.17 (1.94). Ocular tubercle diameter 0.38-0.45 (0.41). Genital operculum length 1.02-

1.18 (1.10), width at base 0.80-1.00 (0.91), width at neck 0.46-0.60 (0.56). Femora I-IV lengths, respectively: 1.26-1.52 (1.36), 2.02-2.64 (2.34), 1.20-1.60 (1.40), 2.23-2.62 (2.39); tibiae I-IV lengths, respectively: 1.09-1.31 (1.19), 1.98-2.40 (2.15), 1.05-1.22 (1.16), 1.68-1.95 (1.80). Palpal lengths: femora 0.42-0.62 (0.54), patellae 0.35-0.41 (0.39), tibiae 0.36-0.47 (0.42), tarsi 0.80-0.92 (0.85). Penes as in Figs. 18, 19.

Immatures: General form as in adults, body soft, reticulate, with many small spines, cream to light brown. Palpal patellae slightly extended on inner margin, with a brush of small spines. Coxae with lobes.

*Distribution*.—Southeastern United States; South Carolina, Georgia, and Florida (Fig. 6).

*Natural history*.—Adults of *E. nigrum* have been collected throughout the year in moist situations under debris. Immatures are known from February in southern Florida.

*Specimens examined* (129).—A total of 57 males, 67 females, and 5 immatures were examined. The number of specimens reported here were pooled over counties for convenience, but a more detailed list of collecting localities is available from the author and is on deposit with the museums recorded in the acknowledgments section. SOUTH CAROLINA: Florence Co., 1; Colleton Co., 1; Jasper Co., 5. GEORGIA: Liberty Co., 2; Camden Co., 14; Ware Co., 1; Clinch Co., 4; Baker Co., 1; County unknown, 1. FLORIDA: Putnam Co., 3; St. John's River, 2; Alachua Co., 29; Dixie Co., 2; Jefferson Co., 1; Citrus Co., 1; Pasco Co., 3; Pinellas Co., 1; Sarasota Co., 18; Desota Co., 8; Charlotte Co., 5; Glades Co., 1; Indian River Co., 6; Dade Co., 19.

#### KEY TO ADULT EUMESOSOMA

1. Denticles in lateral rows on coxae blunt and rounded (Fig. 4).....2  
Denticles in lateral rows on coxae reduced to either tri-pointed (Fig. 3)  
or single spines (Fig. 2) .....4
2. Males .....3  
Females .....*E. arnetti* and *E. roeweri*
3. Alate portion of penes forked anteriorly (Fig. 16) ..... *E. arnetti*  
Alate portion of penes convergent anteriorly (Figs. 12, 14) ...*E. roeweri*
4. Venter of abdomen with only lateral obtuse tubercles; genital operculum and  
coxae with tri-pointed spines .....*E. ephippiatum*  
Venter with many obtuse tubercles; genital operculum and coxae with obtuse  
tubercles or simple spines .....5
5. Genital operculum and coxae with simple spines and few or no obtuse tuber-  
cles; if present not as large as tubercles on venter of abdomen .....6  
Genital operculum and coxae with many obtuse tubercles .. *E. ocalensis*



6. Alate portion of penes forked anteriorly (Fig. 19); without median sheath  
 .....*E. nigrum*  
 Alate portion of penes convergent anteriorly (Fig. 21); median sheath present  
 (Fig. 20) .....*E. sayi*

## ACKNOWLEDGMENTS

Dr. Oscar F. Francke, Dr. Robert W. Mitchell, Dr. William A. Shear, Mr. W. David Sissom, and Mr. Frederick Wagner are gratefully acknowledged for comments on the manuscript. Dr. Clarence J. and Marie L. Goodnight are thanked for many helpful comments and for suggesting the revision of *Eumesosoma*. Dr. Norman V. Horner and the Department of Biology, Midwestern State University provided me with laboratory space and equipment during my studies at that institution as well as aiding me in obtaining many specimens. Mr. William A. Mitchell is acknowledged for his aid and comments on statistical methods. Thanks are extended also to the following individuals and curators for loans and gifts of specimens: Dr. Edward U. Balsbaugh, Jr., North Dakota State University, Fargo, North Dakota (NDSU); Dr. David Barr, Royal Ontario Museum, Toronto, Ontario (ROM); Dr. Clark W. Beasley, McMurry College, Abilene, Texas (CWB); Dr. Harley P. Brown, Stoval Museum of Science and History, Norman, Oklahoma (SMSH); Dr. George W. Byers, Snow Entomological Museum, Lawrence, Kansas (SEM); Dr. Gary A. Covert, The Dayton Museum of Natural History, Dayton, Ohio (DMNH); Dr. R. E. Crabill, Jr., United States National Museum, Washington, D.C. (USNM); Ms. Julia Z. Deal, Lubbock, Texas (now in JCC); Dr. Arlan L. Edgar, Alma College, Alma, Michigan (ALE); Dr. G. B. Edwards, Florida State Collection of Arthropods, Gainesville, Florida (FSCA); Dr. Oscar F. Francke, The Museum, Texas Tech University, Lubbock, Texas (TTU); Dr. M. Grasshoff, Senckenbergische Naturforschenden Gesellschaft, Frankfurt, West Germany (SMF); Mr. John S. Heiss, University of Arkansas, Fayetteville, Arkansas (UA); Dr. Norman V. Horner, Midwestern State University, Wichita Falls, Texas (MSU); Mr. John A. Kochalka, University of Vermont, Burlington, Vermont (UV); Dr. Herbert W. Levi, Museum of Comparative Zoology, Cambridge, Massachusetts (MCZ); Dr. John N. Nelson, Oral Roberts University, Tulsa, Oklahoma (ORU); Dr. William B. Peck, Exline-Peck Collection, Warrensburg, Missouri (EP); Dr. Norman V. Platnick, The American Museum of Natural History, New York, New York (AMNH); Mr. William F. Rapp,

Lincoln, Nebraska (WFR); Dr. Eric H. Smith, Field Museum of Natural History, Chicago, Illinois (FMNH). In addition to the above named curators, thanks are extended to the following curators for searching for type specimens of *Eumesosoma* in their respective museums: Dr. Charles D. Dondale, Canadian National Collection of Insects and Arachnids, Ottawa, Ontario; Dr. Orsetta Elter, Museo ed Istituto di Zoologia Sistemica, Torino, Italy; Dr. J. Kekenbosch, Institut Royal des Sciences Naturelles de Belgique, Bruxelles, Belgium; Dr. Daniel Otte, The Academy of Natural Sciences, Philadelphia, Pennsylvania; Dr. E. Sutter, Naturhistorisches Museum, Basel, Switzerland; Dr. John D. Unzicker, Illinois Natural History Survey, Urbana, Illinois; Dr. George Wallace, Carnegie Museum of Natural History, Pittsburgh, Pennsylvania.

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Address of author: *The Museum and Department of Biological Sciences, Texas Tech University, Lubbock, 79409. Received 22 August, accepted 4 October 1979.*